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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,823	09/08/2000	Nezar A. Gharbia	197-034-USP	2871

45346   7590   12/07/2009
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EXAMINER
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ART UNIT	PAPER NUMBER
2444	

MAIL DATE	DELIVERY MODE
12/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	09/658,823	GHARBIA ET AL.
	Examiner	Art Unit	
	Scott Christensen	2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>19 August 2009</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-30</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail. Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in regards to the most recent papers filed on 8/19/2009.

Response to Arguments

2.   Applicant's arguments filed 8/19/2009 have been fully considered but they are

not persuasive.

3.   On pages 9-11, Applicant's argument appears to focus on the newly amended

language of "a performance characteristic of said first procedure outside of predefined

acceptable bounds during execution."

       As detailed in the rejection below, this language does not explicitly disclose what

constitutes a "performance characteristic" and "acceptable bounds." According to

MPEP 2111, a claim must be given its "broadest reasonable interpretation." Thus, the

instant language appears to include any parameter, variable, flag, etc. of the first

procedure that is outside of an acceptable state, range, area during execution. Thus,

this language does not appear to be substantially different than the term "condition" in

view of Jantz.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

   A person shall be entitled to a patent unless –

   (e) the invention was described in (1) an application for patent, published under section 122(b), by
   another filed in the United States before the invention by the applicant for patent or (2) a patent
   granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

5.   Claims 1, 4, 5, 8-11, 14-16, 19-20, 23-26, and 29-30 are rejected under 35

U.S.C. 102(e) as being anticipated by Jantz et al. in US 6,487,677, hereafter referred to

as "Jantz."

With regard to claim 1, Jantz discloses a method, comprising the steps of:

executing in a computer system a first procedure which effects execution of a

series of project definitions, wherein each said project definition obtains data from a

data source, processes the data in a specified manner, and then places the data in a

data destination (Jantz: Column 1, lines 15-23 and line 60. Computer systems, such as

those disclosed in Jantz, as recognized by a person of ordinary skill in the art, include

programs that meet the requirement of being a procedure that effects execution of a

series of project definitions. For example, Microsoft Windows is utilized to run any of the

series of programs that are stored on the computer. Further, the term "project

definitions" appears to lack an explicit definition in the instant specification, and

accordingly, appears to be properly interpreted as including any program within the

scope of the term. It is further noted that programs always obtain data from a data

source, processes the data in a specified manner, and then places the data in a data

destination, as in order to execute, information about the program is obtained,

processed in the processor, at least in accordance to the information that was retrieved,

with the results being placed in a memory of some sort, such as a registry, cache, etc.) ;

and

executing in said computer system a second procedure which monitors said execution of said first procedure for a performance characteristic of said first procedure outside of predefined acceptable bounds during execution, and which takes remedial action in response to detection of said performance characteristic outside of predefined acceptable bounds during execution (Jantz: Figure 2, steps 200 through 208. The system monitors for an error condition, where an error condition would be when a characteristic is outside of acceptable bounds. A lack of error, meanwhile, would mean that the characteristics are inside acceptable bounds. Applicant should amend the instant claim to clearly recite what constitutes the "acceptable bounds" and "performance characteristic.").

With regard to claim 4, Jantz discloses the step of causing said second procedure to take said remedial action after said first procedure completes executiong of each said project definition currently being executed by said first procedure and before said first procedure commences execution of another said project definition in said series (Jantz: Column 4, lines 45-50. When a program fails and is restarted, the program's execution is completed, and another cannot be executed until after the restart is completed.).

With regard to claim 5, Jantz discloses that the performance characteristic is an efficiency of memory utilization (Jantz: Column 4, lines 45-50. When a program fails, it has no efficiency of memory utilization.).

With regard to claim 8, Jantz discloses that the step of monitoring for said performance characteristic includes the step of determining whether a performance characteristic of said first procedure has dropped below a threshold level (Jantz: Column 4, lines 45-50. There is no requirement as to what constitutes a "threshold level," how the performance characteristic is determined, or even that the threshold level has been defined. Further, there is no requirement as to what constitutes a "performance characteristic." When an operation stops operating (e.g. fails), at least one performance characteristic of the operation can be said to be zero. Accordingly, a performance characteristic has fallen below at least one threshold level.

With regard to claim 9, Jantz discloses that the step of monitoring for said performance characteristic of said first procedure is an activity response of said first procedure (Jantz: Column 4, lines 45-50. There is no requirement as to what constitutes a "threshold level," how the first threshold is determined, or even that the threshold level has been defined. When an operation stops operating (e.g. fails), the activity response of the operation can be said to be zero. Accordingly, the activity response has fallen below at least one threshold.

With regard to claim 10, Jantz discloses that the step of monitoring for said performance characteristic includes the step of detecting that said execution of said first

procedure has transition to an abnormal state (Jantz: Column 4, lines 45-50. When a

program fails, it is in an abnormal state.).

With regard to claim 11, Jantz discloses that the step of taking remedial action

includes the steps of :

terminating operation of the first procedure (Jantz: Column 4, lines 45-50. One of

the possible solutions includes restarting the application, which means that the

application operation is terminated.); and

then re-starting execution of said first procedure (Jantz: Column 4, lines 45-50).

With regard to claim 14, Jantz discloses the step of providing within each said

project definition:

a plurality of function portions which each correspond to one of a plurality of

predetermined function definitions that are different, and which each define at least one

input port and at least one output port that are functionally related according to the

corresponding function definitions (Jantz: Column 1, line 60. The Microsoft Office suite

offers several programs, such as PowerPoint, Word, and Excel. These each can be

considered to be a "project definition," as the term lacks an explicit definition in the

specification that serves to limit the term within the instant claims. Each of these

programs include input ports and output ports, where data is input and output through

these. For example, Word results in information being input through the computer's

keyboard interface, while the information may be output through the display interface to

be displayed on the screen, all of which is in accordance to the functions defined in the

program.);

a further portion which includes a source portion identifying the associated data

source and defining an output port through which data from the data source can be

produced, and which includes a destination portion identifying the associated data

destination and defining an input port through which data can be supplied to the data

destination (Jantz: Column 1, line 60. These are all defined within the programs within

Office.); and

binding information which includes binding portions that each associate an input

port with one of said output ports (Jantz: Column 1, line 60. Office associates the ports

through the programming. For instance, information typed through a keyboard is

associated with the output of the display.).

With regard to claim 15, Jantz discloses the step of causing said data source

associated with said one project definition to provide to said one project definition data

which includes image data (Jantz: Column 1, line 60. Microsoft Office includes Micrsoft

PowerPoint, which includes image data.).

With regard to claims 16, 19-20, 23-26, and 29-30, the instant claims are

substantially similar to claims 1, 4-5, 8- 11, and 14-15, and are rejected for substantially

similar reasons.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 2-3 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Jantz.

        With regard to claim 2, Jantz discloses the invention as substantially claimed

except the steps of providing in said computer system respective first and second

processors, and causing said steps of executing of said first and second procedures to

be respectively carried out on said first processor and said second processor.

        However, Official Notice (See MPEP 2144.03) is taken that computers that

include two processors, where some programs are executing on one processor while

other programs are executed on the second processor were well known in the art.

        Accordingly, it would have been obvious to have the method of Janik include teh

steps of providing in said computer system respective first and second processors, and

causing said steps of executing of said first and second procedures to be respectively

carried out on said first processor and said second processor.

        The suggestion/motivation for doing so would have been that multi-processor

systems allows many operations to be performed faster concurrently, as two processors

are performing instructions instead of just one. Further, having the second procedure

executing on a separate processor than the first procedure allows the second procedure

to continue execution for a wider variety of errors that may occur with respect to the first

procedure, as errors that would result in the processor being over utilized would be able

to be rectified by the procedure operating on the separate processor.

With respect to claim 3, Jantz teaches the invention as substantially claimed

except the steps of:

executing in said computer system on a third processor a third procedure which

obtains data from a data source, which processes the data according to a pre-defined

project definition, and which then places the data in a data destination; and

executing in said computer system on said second processor a fourth procedure

which monitors said execution of said third procedure for a further condition and which

takes remedial action in response to detection of said further condition.

However, Official Notice is taken that computers with three processors were well

known in the art.

Accordingly, it would have been obvious to modify the teachings of Jantz to

include: executing in said computer system on a third processor a third procedure

which obtains data from a data source, which processes the data according to a pre-

defined project definition, and which then places the data in a data destination; and

executing in said computer system on said second processor a fourth procedure which

monitors said execution of said third procedure for a further condition and which takes

remedial action in response to detection of said further condition.

The suggestion/motivation for doing so would have been that including a third processor would have allowed several different operations to be performed concurrently in an even faster fashion. Further, the fourth procedure does not appear to have to be in a distinct program from that of the second procedure, meaning that the two may be represented in a single program that monitors both the first and third operations in the same fashion as disclosed in Jantz.

With regard to claims 17-18, the instant claims are substantially similar to claims 2-3, and are rejected for substantially similar reasons.

Claim Rejections - 35 USC § 103

8.   Claims 6-7, 12-13, 21-22, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jantz in view of McLaren et al. in US 6,393,584, hereafter referred to as "McLaren."

With regard to claim 6, Jantz discloses that the step of taking remedial action is effected in response to a determination that said efficiency has dropped below said threshold (Jantz: Column 4, lines 45-50), and includes the steps of:

interrupting activity of said first procedure, thereafter effecting reorganization of memory utilization associated with said first procedure (Jantz: Column 4, lines 45-50. When a program is restarted, the memory utilization is reorganized.).

However, Jantz does not disclose expressly thereafter causing said first procedure to resume activity from the point at which it was interrupted.

However, McLaren discloses a system which allows a state of a data processing system

to be saved to allow the system to the current operating state of the system after a

restart (McLaren: Abstract).

Accordingly, it would have been obvious to utilize the state recovery of McLaren

in the error recovery of Jantz.

The suggestion/motivation for doing so would have been that not all errors that

require a program to be restarted are a result of incorrect state information. For

instance, the hardware utilized by the system may have failed, another program may

have created a conflict with the program to be recovered, etc. Accordingly, in certain

situations, restoring the state of the program to the current state after restarting would

allow the program to continue execution from the point where it left off, increasing the

efficiency of the system after the error recovery, as processes that were already

performed would not have to be repeated.

With regard to claim 7, Jantz as modified by McLaren teaches the invention as

substantially claimed except the steps of:

queuing input information destined for said first procedure while said first

procedure is interrupted; and

thereafter submitting said queued input information to said first procedure.

However, Official Notice is taken that it was well known to implement queues that

store information destined for a process independent of the current operational state of

the process, which also pass information to the process when the process is ready for the information.

Accordingly, it would have been obvious to modify Jantz as modified by McLaren with the steps of queuing input information destined for said first procedure during a time interval between said terminating and restarting steps; and thereafter submitting said queued input information to said first procedure.

The suggestion/motivation for doing so would have been that utilizing a queue where information is pushed by the input, then pulled by the output allows both the input process and the output process to only be concerned with pushing and pulling the information, respectively, rather than having to be programmed to directly interface with each other. Implementing a queue, such as this one, allows neither the input or process to have to monitor the queue, and further allows the input to pass information to the queue as it is received, while the process itself retrieves information from the queue as the process can handle the information.

With regard to claim 12, Jantz discloses the invention as substantially claimed except that the step of re-starting execution of said first procedure is carried out so as to resume execution of one of said project definitions which was interrupted, beginning with data from the associated data source which immediately follows the last data therefrom which was processed to completion and stored in the associated data destination.

However, McLaren discloses a system which allows a state of a data processing system to be saved to allow the system to the current operating state of the system after a restart (McLaren: Abstract).

Accordingly, it would have been obvious to utilize the state recovery of McLaren in the error recovery of Jantz.

The suggestion/motivation for doing so would have been that not all errors that require a program to be restarted are a result of incorrect state information. For instance, the hardware utilized by the system may have failed, another program may have created a conflict with the program to be recovered, etc. Accordingly, in certain situations, restoring the state of the program to the current state after restarting would allow the program to continue execution from the point where it left off, increasing the efficiency of the system after the error recovery, as processes that were already performed would not have to be repeated.

With regard to claim 13, Jantz as modified by McLaren teaches the invention as substantially claimed except the steps of:

queuing input information destined for said first procedure during a time interval between said terminating and restarting steps; and

thereafter submitting said queued input information to said first procedure.

However, Official Notice is taken that it was well known to implement queues that store information destined for a process independent of the current operational state of

the process, which also pass information to the process when the process is ready for

the information.

Accordingly, it would have been obvious to modify Jantz as modified by McLaren

with the steps of queuing input information destined for said first procedure during a

time interval between said terminating and restarting steps; and thereafter submitting

said queued input information to said first procedure.

The suggestion/motivation for doing so would have been that utilizing a queue

where information is pushed by the input, then pulled by the output allows both the input

process and the output process to only be concerned with pushing and pulling the

information, respectively, rather than having to be programmed to directly interface with

each other. Implementing a queue, such as this one, allows neither the input or process

to have to monitor the queue, and further allows the input to pass information to the

queue as it is received, while the process itself retrieves information from the queue as

the process can handle the information.

With regard to claims 21-22 and 27-28, the instant claims are substantially similar

to claims 6-7 and 12-13, and are rejected for substantially similar reasons.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Scott Christensen whose telephone number is (571)270-

1144. The examiner can normally be reached on Monday through Thursday 6:30AM -

4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. C./
Examiner, Art Unit 2444
/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2444